REMARKS

In order to more clearly distinguish the claimed invention from the prior art cited in the Office Action, independent claims 31, 35, 39 were added, and all the other pending claims were made dependent on them. As such, the rejection of claims 1-30 is moot as the claims now recite elements that are not taught, suggested, or motivated by the cited reference. However, for the sake of obtaining timely allowance of the pending claims, the remarks below are provided.

File storage systems typically model stored data in a form related to the physical characteristics of the storage device, i.e. blocks, sectors, etc.. Unfortunately, for a user manipulating the contents of a data file, having to manipulate the data using the storage system's physical model is often inconvenient at best. Similarly, the data file might be created utilizing a model related to the device used to collect the data, but such a model may also be inconvenient for a user to use. As an example, a video camera might store data as a series of time stamped video clips, but having to view the data as a large set of independent video clips can be problematic.

As pointed out in the specification as filed, it is advantageous when manipulating data in a file that contains data blocks that have an inherent order to group unbroken sequences of data blocks into segments, to generate and assign names to the segments, and to subsequently manipulate the data a segment at a time by using the assigned segment names. The advantages of doing so include freeing users from having to utilize less desirable models without imposing a burden on the user to manually organize the data. Since data files containing data blocks having an inherent order are quite common, it is desirable for a storage apparatus to implement the described segment model by integrating the various components and functionality with the

standard file system operations. Doing so allows an application developer to choose how an application is to access and manipulate data.

The present invention is directed to a file storage apparatus adapted to model a data file containing a plurality of intermittently ordered data blocks wherein each block comprises a sequence identifier by: (a) reviewing the sequence identifiers of the data blocks to identify sets of adjacent data blocks having an unbroken sequence of sequence identifiers; (b) determining and storing the location of each identified set within the file; and (c) generating and associating a name with the stored location of each identified set of sequential data blocks.

In a particular embodiment, each data block is a timestamped video clip with the time stamp of each clip/block being the block's sequence identifier. In such an embodiment, the file storage apparatus is adapted to model a data file containing a plurality of timestamped video clips by: (a) reviewing the timestamps of the video clips to identify sets of adjacent video clips having sequential timestamps; (b) determining and storing the location of each identified set within the file; and (c) generating and associating a name with the stored location of each identified set of sequential video clips.

Utilizing such a model, the apparatus can communicate the generated names to a requesting application so that the requesting application can subsequently use the names as a convenient reference to the identified sets of data blocks. In particular, an application can utilize a segment name to request the file storage apparatus to provide the contents of the identified set having the location associated with that name. Similarly, the application can utilize a segment name, by providing the name and a set of data blocks to the file storage apparatus, to replace the contents of the identified set having the location associated with the name.

As stated above, new independent claims (31,35,39) were added, and all the other pending claims were made dependent on them.

It should be noted that newly added claim 31 is at least partially characterized by the segment judging unit that, for each file stored in the file storage unit, reads the two pieces of data,. extracts two numbers respectively from the read two pieces of data, and judges whether the two numbers are continuous, and by the segment generating unit that generates a segment containing the read two pieces of data if the segment judging unit judges that the two numbers are continuous. As discussed generally above, the invention as claimed provides an advantageous effect of incorporating two pieces of data that contain two continuous numbers, into a segment, thus enabling each segment to be distinguished on a continuity basis. This is achieved by the segment judging unit and the segment generating unit.

Applying the recitations of claim 31 to the video camera example, suppose that a video camera can record video data together with recording time that are recorded at regular intervals while the video camera is recording the video data. If two pieces of video data that have been recorded at different times are stored n the same file, then the video data stored in the file as a whole is divided into two parts that are discontinuous in recording time. That is to say, each piece of video data includes only continuous values as the recording time. For this reason, it is possible to divide the video data into logical units by judging whether they are continuous in time series. The logical units are referred to herein and in the specification as segments.

When the present invention of claim 31 is applied to the sample case, the two pieces of video data that have been recorded at different times can be recognized as two different segments. It is therefore possible to read the two pieces of video data separately.

The Office Action cites the combination of *Rusterholz et al.*, *Furegati et al.*, and *Hisatorni et al.* (hereinafter Rusterholze, Furegatti, and Hisatorni) as a basis for a §103 rejection of the originally filed claims. This rejection is moot in light of the addition of a new set of independent claims that recite elements not taught, suggested, or motivated by the cited references.

Rusterholz is directed to a processor for use in a system having a general purpose host processor and a high performance storage unit. *Furegatti* addresses how to subdivide a growing data collection into individual compartments while preserving the overall logical data context. *Hisatomi* is directed to obtaining and formatting storage information as data is being recorded. None of the cited references teach, suggest, or motivate a file apparatus that, after a data file has already been created, is able to scan the file and divide it into segments of continuous data.

More specifically, none of the cited references, individually or in combination teaches, suggests, or motivates the segment judging unit and the segment generating unit, which are the characteristics of the present invention of claim 31. Accordingly, if a device comprising any of the features of the cited references or any combination thereof is applied to the above-provided sample case, such a device would be unable to recognize that two pieces of video data that have been recorded at different times, and therefore impossible to read the two pieces of video data separately as two different segments.

In contrast, the present invention provides an advantageous effect of incorporating two pieces of data that contain two continuous numbers, into a segment, thus enabling each segment to be distinguished on a continuity basis.
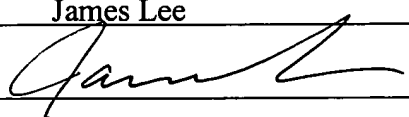
It should also be noted that, even if all the claimed elements were taught, the Office Action fails to provide an adequate reason for combining the references. The Office action

asserts that it would have been obvious to combine Furegati with Rusterholze, and Hisatomi with Furegati and Rusterholz because of the references disclose similar elements. However, similarity of elements is an insufficient reason for combining references. The references all attempt to solve different problems, none of which are the problem addressed by the present invention. The references themselves fail to teach or suggest the proposed combination. The Office Action does not provide any reason why someone of ordinary skill in the art would choose to combine the references as proposed. As such, there is no support for the assertion that the references in combination anticipate any of the claims.

The arguments in support of claim 31 also apply to Claims 35 and 39, and to all the other claims which depend on claims 31, 35, and 39. As such, the cited references fail to teach, suggest or motivate the apparatus, method and recording medium claimed.

It is believed that the case is now in condition for allowance, and an early notification of the same is requested. If the Examiner believes that a telephone interview will help further the prosecution of this case, he is respectfully requested to contact the undersigned attorney at the listed telephone number.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on March 11, 2004.

By: _____James Lee_____

Signature

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Very truly yours,

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